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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,337	06/13/2000	Michael Marcovici	2-27	5543

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EXAMINER

KIM, JUNG W

ART UNIT PAPER NUMBER

2132

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/592,337

Applicant(s)

MARCOVICI ET AL.

Examiner

Jung W Kim

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-6 have been examined.

#### ***Response to Amendment***

2. Examiner withdraws the objection to the specification for not clearly defining the RES attribute as the amendment to the disclosure overcomes the objection.

#### ***Specification***

3. The disclosure is objected to because of the following informalities: on page 2, lines 28-29, the sentence is missing a period. Appropriate correction is required.

#### ***Claim Objections***

4. Claim 2 is objected to because of the following informalities: the word "aperiodically" is misspelled. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1

7. The term "substantially" in claim 5 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The degree by which the first and second keys have the same value is rendered indefinite by the term "substantially". For the purpose of furthering prosecution, the claim will be interpreted wherein the first and second keys have the same value.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in the applicants specification: "Description of Related Art" (hereinafter admission) in view of Stallings Cryptography and Network Security 2<sup>nd</sup> Edition (hereinafter Stallings). As per claims 1 and 3-5, admission teaches an AKA method for authenticating a mobile to a Serving Network, the method comprising the steps of:

a. Establishing a security association between the mobile and the Serving Network thus authenticating the mobile to the Serving Network (page 3, line 1- page 5, line 26);

Art Unit: 1

Admission does not cover a step of challenging the authenticity of the mobile once it has been established by the AKA method. However, means for continuous authentication by means of challenges has been known in the art at the time the invention was made. Stallings teaches the use of challenges to authenticate the identity of the user for each new message (see Stallings, page 304, 2<sup>nd</sup> paragraph, especially 6<sup>th</sup> bullet 'Challenge/response'). It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Stallings to the method taught in admission. Motivation for such an implementation ensures the identity of the mobile unit for the duration of the connection to the Serving Network as taught by Stallings. Hence, the invention disclosed by admission modified by Stallings also covers the steps of:

- b. Challenging the authenticity of the mobile and preventing the mobile from having access to the Serving Network when the mobile cannot authenticate itself to the SN (see admission, page 6, line 17 as modified by Stallings, page 304, 6<sup>th</sup> bullet 'Challenge/response').

Finally, this modified invention covered by admission does not expressly disclose using key values to authenticate the mobile station; however, as taught by Stallings in a different section, authentication using one-way hashes with received secret symmetric keys are conventionally used for challenge authentication methods, wherein a challenge message is sent to a receiver and the receiver returns a hash of the message to the receiver; the receiver is authenticated when the received hash matches a stored or generated hash of the message by the sender (see Stallings, page 247, a-e). It would

Art Unit: 1

be obvious to one of ordinary skill in the art at the time the invention was made for the challenge steps to be authenticated by means of one-way hashes using shared secret keys between the sender and the receiver. Motivation for such a combination uses standard cryptographically secure means to authenticate the mobile station. Hence, the method covered by admission and modified by Stallings covers keys received and used to authenticate the mobile by the Serving Network. The aforementioned cover claims 1 and 3-5.

10. As per claim 2, admission covers a method for authenticating a mobile to a Serving Network as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the step of challenging the authenticity of the mobile is performed periodically, aperiodically, continually, or continuously during the communication session (see Stallings, page 304, 6<sup>th</sup> bullet 'Challenge/response').

11. As per claim 6, admission covers a method for authenticating a mobile to a Serving Network as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the step of receiving the first key comprises receiving a clear or unciphered anonymity key (see admission, page 5, lines 14-18).

### ***Response to Arguments***

12. Applicant's arguments with respect to amended claim 1 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (703) 305-8289. The examiner can normally be reached on M-F 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

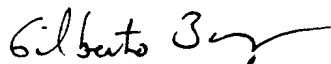
Art Unit: 1

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim  
Examiner  
Art Unit 2132

Jk  
March 3, 2004



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